

Applicant : J. Richard Aylward  
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Attorney's Docket No.: 02103-369001 / AABOSS12

### REMARKS

Claims 1-28 are resubmitted for consideration without amendment in the light of the following remarks and authorities.

1. While applicant provisionally elected species I without traverse pending allowance of a generic claim, a generic claim is submitted to be allowable, and examination of all the claims on the merits is respectfully requested.

2,3. The office action states:

Claims 1-3, 5, 6, 8, 10, 11, 14-17, 20, 21, 25, 26, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazuyoshi et al. ("Kazuyoshi") (JP 2-11941) Translation submitted with IDS on 28 January 2004.

Regarding Claim 1, Kazuyoshi discloses an electroacoustic waveguide system, comprising: an acoustic waveguide (Fig. 3) having an open end (right side of waveguide) and an interior; a first acoustic driver (Fig. 3e, driver at left end) connected to said acoustic waveguide having a first radiating surface (radiating into wave guide) and a second radiating surface (backside or driver radiating outside or waveguide), constructed and arranged so that said first radiating surface radiates sound waves into free air and said second radiating surface radiates sound waves into said acoustic waveguide so that sound waves are radiated at said open end (right side or waveguide); and a source of opposing sound waves in said acoustic waveguide (driver on bottom wall of waveguide) for opposing a predetermined spectral component of said sound waves radiated into said acoustic waveguide to oppose the acoustic radiation of said predetermined spectral component from said acoustic waveguide (Kazuyoshi discloses second driver cancels the 3rd order resonance frequency; Page 4, paragraphs 2-6).

Regarding Claim 2, Kazuyoshi further discloses an acoustic port, coupling said interior with free air (Fig. 3, right end of waveguide).

Regarding Claim 3, Kazuyoshi further discloses said predetermined spectral component comprises the opposition frequency (Kazuyoshi discloses 3'd order resonance frequency cancellation; Page 4, paragraphs 2-6; Fig. 3c).

Regarding Claim 5, Kazuyoshi further discloses said source or opposing sound waves comprises a second acoustic driver arranged and constructed to radiate sound waves into said acoustic waveguide (Fig. 3e, driver attached to bottom side or waveguide).

Regarding Claim 6, Kazuyoshi further discloses an acoustic port, coupling said interior with free air (Fig. 3, right end of waveguide).

Regarding Claim 8, Kazuyoshi further discloses predetermined spectral component comprises a dip frequency at which said waveguide system produces an acoustic null, absent said source of opposing sound waves (Kazuyoshi

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discloses canceling 3rd order resonance frequency, i.e. acoustic null, Page 4, paragraphs 2-6).

Regarding Claim 10, Kazuyoshi further discloses said source or opposing sound waves comprises a second acoustic driver arranged and constructed to radiate sound waves into said acoustic waveguide (Fig. 3e, driver attached to bottom side of waveguide).

Regarding Claim 11, Kazuyoshi discloses an electroacoustic waveguide system, comprising: an acoustic waveguide (Fig. 3) having an open end (right end of waveguide) and a closed end (left end of waveguide) and further having an effective length; an acoustic driver for radiating sound waves into said waveguide, positioned in said acoustic waveguide so that there is an acoustic null at said open end at a dip frequency (Kazuyoshi discloses positioning driver at  $2/3$  to cancel the 3'd order resonance frequency, i.e. dip frequency, Page 4, paragraphs 2-6).

Regarding Claim 14, Kazuyoshi discloses an electroacoustic waveguide system comprising: an acoustic waveguide (Fig. 3) having an open end (right end of waveguide) and a closed end (left end of waveguide) and a wall connecting said open end and said closed end; a plurality of acoustic drivers, each having a first radiating surface and a second radiating surface; wherein a first of said acoustic drivers is placed in said wall of said acoustic waveguide (driver on bottom side of waveguide, Fig. 3e) so that said first radiating surface of said first acoustic driver radiates into said acoustic waveguide and said second radiating surface of said first acoustic driver radiates into free air.

Regarding Claim 15, Kazuyoshi further discloses a second of said acoustic drivers is positioned in said closed end of said acoustic waveguide (left end of waveguide). Regarding Claim 16, Kazuyoshi further discloses a second of said plurality of acoustic drivers is placed in said wall of said acoustic waveguide so that said first radiating surface of said second driver radiates into said acoustic waveguide and said second radiating surface of said second acoustic driver radiates into free air (Fig. 6).

Regarding Claim 17, Kazuyoshi further discloses combining radiation of said plurality of acoustic drivers to produce an acoustic null at the open end of said waveguide at a dip frequency (Kazuyoshi discloses second driver cancels the 3'd order resonance frequency; Page 4, paragraphs 2-6).

Regarding Claim 20, Kazuyoshi discloses an electroacoustic waveguide system comprising: an acoustic waveguide (Fig. 3) having an open end (right end of waveguide) and a closed end (left end of waveguide) and an effective midpoint; a plurality of acoustic drivers; and an acoustic compliance acoustically coupling a first of said plurality of acoustic drivers and said acoustic waveguide (it is inherent that air within the waveguide will provide an acoustic compliance).

Regarding Claim 21, Kazuyoshi further discloses a first of said plurality of acoustic drivers is positioned at approximately said effective midpoint (Fig. 4).

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Regarding Claim 25, Kazuyoshi discloses a method for operating an acoustic waveguide (Fig. 3) having an open end (right side of waveguide) and a closed end (left end of waveguide) and a wall connecting said open end and said closed end, comprising, radiating acoustic energy into said acoustic waveguide (driver at left end of waveguide); and significantly opposing acoustic radiation at a predetermined dip frequency (Kazuyoshi discloses canceling 3rd order resonance frequency, Page 4, paragraphs 2-6).

Regarding Claim 26, Kazuyoshi further discloses opposing acoustic radiation comprises providing opposing acoustic radiation in said acoustic waveguide Fig. 3c; Page 4, paragraphs 2-6).

Regarding Claim 28, Kazuyoshi further discloses an opposing acoustic radiation comprises radiating, by a second acoustic driver (driver on bottom wall of waveguide), said opposing acoustic energy into said acoustic waveguide (Kazuyoshi discloses second driver cancels the 3<sup>rd</sup> order resonance frequency; Page 4, paragraph- 2-6). Pp.2-6.

These grounds of rejection are respectfully traversed. We rely on the authority set forth on pages 9 and 10 of the response transmitted June 2, 2004.

Claims 1-3, 5, 6, 8, 10, 14-17, are not anticipated by the reference at least because the reference does not disclose an acoustic driver connected to the acoustic wave guide having a first radiating surface and a second radiating surface constructed and arranged so that the first radiating surface radiates sound waves into free air and the second radiating surface radiates sound waves into the acoustic wave guide so that the sound waves are radiated at the open end, nor does the reference disclose the acoustic driver for radiating sound waves into the wave guide positioned in the acoustic wave guide so that there is an acoustic null at the open end at a dip frequency as defined in the paragraph spanning pages 2 and 3 of the specification, nor the acoustic compliance acoustically coupling a first of the plurality of acoustic drivers and the acoustic wave guide as called for by claims 20 and 21, nor radiating acoustic energy into the acoustic wave guide and significantly opposing acoustic radiation at the predetermined dip frequency as called for by claims 25, 26 and 28.

Accordingly, withdrawal of the rejection of claims 1-3, 5, 6, 8, 10, 11, 14-17, 20, 21, 25, 26 and 28 as anticipated by the reference is respectfully requested. If this ground of rejection is

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repeated, the Examiner is respectfully requested to quote verbatim language in the reference regarded as corresponding to the limitations identified above as absent from the reference.

4,5. The office action states:

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kazuyoshi as applied to claim 6 above in view of Edgar (US Patent 5,588,06 ).

Kazuyoshi discloses a system as stated apropos of claim 6 above including a closed end (left end of waveguide). Kazuyoshi does not disclose an acoustic port positioned between said first acoustic drive and said closed end of said acoustic waveguide. Edgar discloses a waveguide system including acoustic ports (Fig. 4, ports 52) in order to improve the directionality of the speaker system (Col. 5, lines 60-66). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include acoustic ports to improve the directionality of the speaker system as taught by Edgar. Pp. 6-7.

This ground of rejection is respectfully traversed. We rely on the authorities set forth on pages 14-16 of the response transmitted June 2, 2004.

Claim 7 is dependent upon and includes all the limitations of claims 1 and 5, and we have shown above that claims 1 and 5 are not anticipated by the reference. Therefore, it is impossible to combine the primary and secondary references to meet the limitations of claim 7. That it is impossible to combine the primary and secondary references to meet the limitations of claim 7 is reason enough for withdrawing the rejection of this claim.

If this ground of rejection is repeated, the Examiner is respectfully requested to quote verbatim language from the references corresponding to each limitation in claim 7, and quote verbatim the language in the references regarded as suggesting the desirability of combining what is there disclosed to meet the limitations of claim 7.

Since generic claims 1, 11, 20 and 25 are properly allowable in this application, examination on the merits on claims 4, 9, 12, 13, 18, 19, 22-24 and 27 is respectfully requested.

In view of the forgoing authorities, remarks and the inability of the prior art to anticipate, suggest or make obvious the subject matter as a whole of the invention disclosed and claimed in this application, all the claims are submitted to be in a condition for allowance, and notice thereof is respectfully requested. Should the Examiner believe the application is not in a condition for allowance he is respectfully requested to telephone the undersigned attorney at

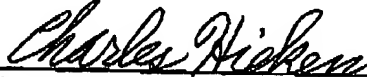
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617-521-7014 to discuss what additional steps he believes are necessary to place the application in a condition for allowance.

Respectfully submitted,  
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